

CLAIMS

What is claimed is:

1. A reconfigurable pallet that supports a structure, comprising:
a pallet base;
at least one track formed in said pallet base;
a plurality of modular stanchions that are supported on said pallet base and slidably engage said at least one track to selectively position said modular stanchions along x and y axes relative to a top surface of said pallet base, said modular stanchions each including a support element that has a height along a z axis that is transverse to said x and y axes, said support element supporting said structure.
2. The reconfigurable pallet of claim 1 wherein said x and y axes are parallel to a top surface of said pallet base and said z axis is perpendicular to said x and y axes.
3. The reconfigurable pallet of claim 1 wherein said support element is movable along said z axis to adjust said height.
4. The reconfigurable pallet of claim 3 wherein each of said modular stanchions further comprises a support cylinder that is selectively actuated to move said support element to a position along said z axis.

5. The reconfigurable pallet of claim 4 further comprising a hydraulic pump in fluid communication with said support cylinder and operable to adjust a hydraulic pressure within said support cylinder to move said support element along said z axis.

6. The reconfigurable pallet of claim 1 wherein each of said modular stanchions further comprises a stanchion base that supports said support element.

7. The reconfigurable pallet of claim 6 wherein said pallet base further includes a screw-drive that engages said stanchion base wherein rotation of said screw-drive induces linear motion of said modular stanchion along said track.

8. The reconfigurable pallet of claim 1 wherein said at least one track extends from a center point of said pallet base.

9. The reconfigurable pallet of claim 8 wherein said pallet base further includes a rotatable member that is rotatable about said center point and that supports said at least one track.

10. A pallet that is configurable to support first structure and reconfigurable to support a second structure, comprising:

a pallet base;

at least one track formed in said pallet base; and

a plurality of modular stanchions that slidably engage said at least one track to selectively move along x and y axes relative to a top surface of said base, said modular stanchions each including a support element that is has a height defined along a z axis transverse to said x and y axes, said support element having a first position to support said first structure and having a second position to support said second structure.

11. The pallet of claim 10 wherein said support element is movable along said z axis to adjust said height.

12. The pallet of claim 10 wherein each of said modular stanchions further comprises a support cylinder that is selectively actuated to move said support element to a position along said z axis.

13. The pallet of claim 12 further comprising a hydraulic pump in fluid communication with said support cylinder and operable to adjust a hydraulic pressure within said support cylinder to move said support element along said z axis.

14. The pallet of claim 10 wherein each of said modular stanchions further comprises a stanchion base that supports said support element.

15. The pallet of claim 14 wherein said pallet base further includes a screw-drive that engages said stanchion base wherein rotation of said screw-drive induces linear motion of one of said modular stanchions.

16. The pallet of claim 10 wherein said track extends from a center point of said pallet base and that engages said stanchion base for movement of said stanchion base across said x and y axes.

17. The pallet of claim 16 wherein said pallet base further includes a rotatable member that is rotatable about said center point and that supports said track.

18. A reconfigurable pallet that is configurable to support multiple structures, comprising:

a pallet base;

at least one track formed in said pallet base; and

a modular stanchion that comprises:

a stanchion base that is slidably supported on said at least one track and that is movable along x and y axes relative to a top surface of said pallet base; and

a support element that is supported on said stanchion base and that has a height transverse to said x and y axes along a z axis, said support element having a first position to support a first structure and a second position to support second structure.

19. The reconfigurable pallet of claim 18 wherein said support element is movable along said z axis to adjust said height.

20. The reconfigurable pallet of claim 19 wherein said modular stanchion further comprises a support cylinder that is selectively actuated to move said support element to a position along said z axis.

21. The reconfigurable pallet of claim 20 further comprising a hydraulic pump in fluid communication with said support cylinder and operable to adjust a

hydraulic pressure within said support cylinder to move said support element along said z axis.

22. The reconfigurable pallet of claim 18 wherein said base further includes a screw-drive that engages said stanchion base wherein rotation of said screw-drive induces linear motion of said modular stanchion along said track.

23. The reconfigurable pallet of claim 18 wherein said track extends from a center point of said pallet base and that engages said stanchion base for movement of said stanchion base across said x and y axes.

24. The reconfigurable pallet of claim 23 wherein said pallet base further includes a rotatable member that is rotatable about said center point and that supports said track.

25. An assembly line for assembling a product, comprising:
- a plurality of operation stages; and
 - a pallet that supports a base structure of said product and carries said base structure between said operating stages, comprising:
 - a pallet base;
 - at least one track formed in said pallet base;
 - a stanchion base that is supported on said pallet base and that is movable along x and y axes relative to a top surface of said pallet base; and
 - a support element that is supported on said stanchion base and that has a height transverse to said x and y axes along a z axis, said support element having a first position to support said base structure.
26. The assembly line of claim 25 wherein said support element is movable along said z axis to adjust said height.
27. The assembly line of claim 26 wherein said pallet further comprises a support cylinder that is supported by said stanchion base and that is selectively actuated to move said support element to a position along said z axis.
28. The assembly line of claim 27 further comprising a hydraulic pump in fluid communication with said support cylinder and operable to adjust a hydraulic pressure within said support cylinder to move said support element along said z axis.

29. The assembly line of claim 25 wherein said pallet base further includes a screw-drive that engages said stanchion base wherein rotation of said screw-drive induces linear motion of said modular stanchion along said track.

30. The assembly line of claim 25 wherein said track extends from a center point of said pallet base and that engages said stanchion base for movement said stanchion base across said x and y axes.

31. The assembly line of claim 30 wherein said pallet base further includes a rotatable member that is rotatable about said center point and that supports said track.